

A

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26

1. An adapter for removable attachment to a PDA, the adapter comprising:
 - (a) an interface connector configured to removably electrically couple with the PDA;
 - (b) a micro controller electrically coupled with the interface connector;
 - (c) a light source configured to emit a light beam; and
 - (d) a photo detector electrically coupled to the micro controller.

2. An adapter as recited in claim 1, wherein ^{the} light source is a laser.

3. An adapter as recited in claim 1, further comprising means electrically coupled to the micro controller for converting electrical signals between analog and digital.

4. An adapter as recited in claim 3, wherein the light source and the photo detector are configured such that the light beam from the light source can be reflected off a bar code and received by the photo detector.

5. An adapter as recited in claim 4, further comprising means for converting the light beam from the light source into a digital signal.

6. An adapter as recited in claim 5, wherein the means for converting the light beam comprises switching circuitry for turning the light source on and off.

12

**A PROFESSIONAL CORPORATION
ATTORNEYS AT LAW
1000 EAGLE GATE TOWER
60 EAST SOUTH TEMPLE
SALT LAKE CITY, UTAH 84111**

[illegible]

5 3
7. An adapter as recited in claim 8, wh

~~7~~. An adapter as recited in claim ~~6~~, wherein the means for converting the light beam comprises an LCD positioned in the path of the light beam, the LCD being operable between an on position which blocks the light beam and an off position which allows the light to pass therethrough.

Sub.
A

8. An electrical apparatus comprising:

(a) a PDA comprising a low profile box shaped case having a front face extending between a top end and a bottom end, a display screen is positioned on the front face and a first interface connector is positioned at the bottom end, the case of the PDA enclosing a microprocessor;

(b) an adapter comprising:

(i) a substantially L-shaped housing comprising a base and an arm, the arm projecting from the base to a free end;

(ii) a second interface connector mounted to the base of the housing, the second interface connector being configured to electrically couple with the first interface connector for transferring electrical signals therebetween;

(iii) means for removably coupling the housing of the adapter to the PDA such that the first and second interface connectors are electrically coupled and the free end of the arm is positioned at the top end of the PDA housing;

(iv) a light source at least partially disposed within the arm and configured to emanate a light beam through the free end thereof;

(v) a photo detector at least partially positioned at the free end of the arm; and

(vi) an analog to digital converter disposed within the housing and electrically coupled to the photo detector.

9. An electrical apparatus as recited in claim 8, wherein a micro processor is disposed within the adapter housing and is electrically coupled with the analog to digital converter.

366060-1539060

1 ¹²
2 ~~10.~~ An electrical apparatus as recited in claim ~~8~~, wherein the adapter housing
3 comprises a battery compartment.

4 ¹³
5 ~~11.~~ An electrical apparatus as recited in claim ~~8~~, wherein the light source is a
6 laser.

7 ¹⁴
8 ~~12.~~ An electrical apparatus as recited in claim ~~11~~, wherein the laser emits a visible
9 red light that is sufficiently collimated to function as a pointer.

10 ¹⁵
11 ~~13.~~ An electrical apparatus as recited in claim ~~8~~, wherein the adapter further
12 comprises a manual button for turning the light source on and off.

13 ¹⁶
14 ~~14.~~ An electrical apparatus as recited in claim ~~8~~, wherein the light source and the
15 photo detector are configured such that the light beam from the light source can be reflected
16 off a bar code and received by the photo detector.

17 ¹⁷
18 ~~15.~~ An electrical apparatus as recited in claim ~~8~~, further comprising an LCD
19 positioned in the path of the light emitting from the light source, the LCD being operable
20 between an on position which block^s light from passing therethrough and an off position
21 which allows light to pass therethrough.
22
23
24
25
26

18

16. A PDA comprising:

(a) a housing having a front face extending between a top end and an opposing bottom end, a display screen is positioned on the front face and an interface connector is positioned at the bottom end,

(b) a micro controller is disposed within the housing and is electrically coupled to the connector;

(c) a laser is disposed within the housing and is configured to emit a light beam through the top end of the housing;

(d) an analog to digital converter is disposed within the housing and is electrically coupled with the micro controller;

(e) a photo detector is positioned at the top end of the housing and is configured to receive reflected light from the laser.

19

18

17. A PDA as recited in claim 16, further comprising means for converting light from the laser into a digital signal.

20

18

18. A PDA as recited in claim 16, wherein the laser emits a visible red light that is sufficiently collimated to function as a pointer.

Add
A2

16